

July 2015

Mitchell County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 15 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Mitchell County economy.¹ These 15 sectors have a total direct output of approximately \$468 million and support 942.4 jobs in Mitchell County. Running the model for all 15 sectors simultaneously produces the following results:

Agriculture Contribution in Mitchell County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	942.4	21%	\$101,558,118	32%	\$468,022,963	148%
Indirect Effect	428.6	9%	\$38,365,579	12%	\$65,390,986	21%
Induced Effect	227.2	5%	\$15,833,048	5%	\$26,929,818	9%
Total Effect	1,598.2	35%	\$155,756,745	49%	\$560,343,767	178%

As shown in the above table, agriculture, food, and food processing supports 1,598.2 jobs, or 35% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$560 million, roughly 178% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 15 agriculture, food, and food processing sectors is approximately \$156 million, or 49% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 49% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, Farm machinery and equipment manufacturing is the top employer in the agriculture industry with 454.9 employees. This table also shows the amount of jobs that are created by the agriculture industry in Mitchell County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Farm machinery and equipment manufacturing.....	454.9	\$279,706,153
Wholesale trade.....	160.1	\$34,066,912
Grain farming	155.5	\$66,733,911
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	142.7	\$45,306,508
All other crop farming.....	62.7	\$9,750,001
Monetary authorities and depository credit intermediation	40.9	\$6,322,894
Retail - Motor vehicle and parts dealers	40.2	\$5,639,844
Truck transportation.....	39.7	\$6,012,245
Commercial hunting and trapping.....	34.4	\$1,601,582
Limited-service restaurants.....	27.9	\$1,648,113

The Farm machinery and equipment manufacturing industry directly contributes approximately \$280 million to Mitchell County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Farm machinery and equipment manufacturing.....	454.9	\$279,706,153
Grain farming	155.5	\$66,733,911
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	142.7	\$45,306,508
Other animal food manufacturing.....	23.9	\$35,018,158
Wholesale trade.....	160.1	\$34,066,912
Oilseed farming.....	7.4	\$19,507,802
All other crop farming.....	62.7	\$9,750,001
Monetary authorities and depository credit intermediation	40.9	\$6,322,894
Owner-occupied dwellings	0.0	\$6,178,656
Truck transportation.....	39.7	\$6,012,245

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Mitchell County's economy.

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All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.